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10/812,913

03/31/2004

Yukinori Otsuka

023484-0164

5704

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7590

05/23/2005

FOLEY AND LARDNER

SUITE 500

3000 K STREET NW

WASHINGTON, DC 20007

EXAMINER

KING, BRADLEY T

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/812,913

Applicant(s)

OTSUKA, YUKINORI

Examiner

Bradley T King

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3-04</u> . | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 3 requires continuous magnetic paths through the lower walls. Claim 3 also depends from claim 2 which requires a strip in the lower wall. The instant disclosure describes the strip as disrupting magnetic paths (page 9). The instant disclosure fails to support and enable the combination of a strip in the bottom wall and continuous magnetic paths through the bottom wall.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 7, 10, 14, and 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7, 10 and 14 all recite "the same". It is not clear what is meant by this limitation.

Claim 16 recites "a slit". It is not clear if this is the same slit as required by parent claim 1, or an additional slit.

Claim 20 recites "a plurality of electromagnetic valves abreast installed in the yoke". This limitation is generally awkward and confusing.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8-11, 14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/70628.

WO 00/70628 discloses all the limitations of the instant claims including; a yoke of magnetic metal 1, the yoke including upper 1c and lower 1a walls that are integrally connected by side walls 1d; a slit 1f provided by the upper wall of the yoke, the slit extending along a longitudinal axis of the yoke between axially opposed ends of the yoke, and solenoid coils 9 having terminal members 8 projected outward from the yoke

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through the slit. Note that WO 00/70628 discloses that the unit includes a plurality of yoke members 1 stacked into the page as viewed in figure 1. These members together can be considered to form "the yoke" as required by the claims.

Regarding claim 14, the coils can be grouped in pairs.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6-7, 12-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/70628 in view of Staib et al (US# 5842763).

WO 00/70628 discloses all the limitations of the instant claims with exception to a resilient strip in the lower wall. Staib et al disclose a similar valve unit and further teach resilient strips (figure 2) for biasing coil assemblies. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the integral yoke structure disclosed by WO 00/70628 to include a resilient strip element such as taught by Staib et al to ensure proper retention and positioning of the coil assembly without increasing parts.

Claims 1, 8-11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamaoki et al (US# 5458150) in view of WO 00/70628.

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Tamaoki et al discloses a valve unit including; a yoke of magnetic metal (figure 2 and 4), the yoke including upper 4 and lower walls that are integrally connected by side walls (note, the side, upper and lower walls connect together to form an integral unit); a slit 8a provided by the upper wall of the yoke, the slit extending along a longitudinal axis of the yoke between axially opposed ends of the yoke. Tamaoki et al lack the disclosure of solenoid coils having terminal members projected outward from the yoke through the slit. WO 00/70628 disclose a similar valve yoke structure and further teach the utilization of a slit to hold terminal ends of coil members. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a slit to hold the terminal ends of the coil members of Tamaoki et al as taught by WO 00/70628 as an obvious means of connection which aids in retention and electrical connection of the coil members with a simplified structure.

Regarding claim 8, see figures 3-6.

Claims 2, 6-7, 12-13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamaoki et al (US# 5458150) and WO 00/70628, as applied to claim 1 above, in further view of Staib et al (US# 5842753).

Tamaoki et al and WO 00/70628 discloses all the limitations of the instant claims with exception to a resilient strip in the lower wall. Staib et al disclose a similar valve unit and further teach resilient strips (figure 2) for biasing coil assemblies. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the yoke structure disclosed by Tamaoki and WO 00/70628 to include a

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resilient strip element such as taught by Staib et al to ensure proper retention and positioning of the coil assembly without increasing parts.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaneko et al, Alaze et al, and Kline et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BTK

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Robert A. Siconolfi 5/16/05
ROBERT A. SICONOLFI
PATENT EXAMINER